IN THE CLAIMS:

The text of all pending claims (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 10 and 31 without prejudice or disclaimer in accordance with the following:

1. (Original) A method of measuring an amount of unbalance of a disc, comprising:

storing a plurality of reference disc unbalance values;

measuring an RPM (Rotation Per Minute) of the disc;

comparing the measured RPM with a target RPM; and

when the measured RPM reaches the target RPM, detecting a reference disc unbalance value from the plurality of reference disc unbalance values based on an elapsed time to reach the target RPM.

2. (Original) A method of measuring the amount of unbalance of a disc, comprising:

measuring an RPM of the disc when the disc is controlled to change a rotation speed thereof from a predetermined low speed to a predetermined high speed;

comparing the measured RPM with a target RPM; and

when the measured RPM reaches the target RPM, detecting disc unbalance based on a time elapsed to reach the target RPM beginning from the time when the rotation speed of the disc is changed from the predetermined low speed to the predetermined high speed.

3. (Original) The method of claim 2, further comprising an operation of storing a plurality of reference disc unbalance values, wherein the detection of the amount of disc imbalance is performed by detecting a reference disc unbalance value among the plurality of reference disc unbalance values based on the elapsed time.

4. (Original) The method of claim 2, wherein the measurement of the RPM of the

disc is performed regardless of a stabilized condition of a spindle servo of the disc drive.

5. (Original) An apparatus measuring the unbalance of a disc, comprising:

a spindle motor rotating the disc;

a memory storing a target RPM and a plurality of reference disc unbalance values based on a time to reach the target RPM; and

a system controller measuring a time to reach the target RPM after the spindle motor begins rotating and detecting a reference disc unbalance value from the second memory based on the measured time.

6. (Original) An apparatus measuring the amount of unbalance of a disc, comprising:

a spindle motor rotating the disc;

a motor driving unit driving the spindle motor;

a memory storing a target RPM and a plurality of reference disc unbalance values based on the time to reach the target RPM; and

a system controller measuring an RPM of the spindle motor when the spindle motor is controlled to change from a predetermined low speed mode to a predetermined high speed mode and detecting, from the second memory, a reference disc unbalance value corresponding to the time to reach the target RPM beginning when the spindle motor is controlled to change from the predetermined low speed mode to the predetermined high speed mode.

7. (Original) The apparatus of claim 6, wherein the system controller measures the RPM during the time to change from the predetermined low speed mode to the predetermined high speed mode regardless of a stabilized condition of a spindle motor of the disc drive.

8. (Original) The apparatus of claim 6, wherein the system controller drives a timer to measure the elapsed time when the spindle motor is controlled to change from the predetermined low speed mode to the predetermined high speed mode.

9. (Original) The apparatus of claim 6, wherein the memory comprises:

a first memory storing the target RPM;

a second memory storing the plurality of reference disc unbalance values based on the time to reach the target RPM.

10. (Cancelled)

11. (Original) An apparatus measuring the imbalance of an optical disc, comprising:

a system controller that increases an RPM of the optical disc, measures the time of the optical disc to reach a target RPM, and correlates the time to reach the target RPM to a disc imbalance value.

12. (Original) The apparatus of claim 11, further comprising:

a pickup that detects optical signals from the disc, converts the detected optical signals to electrical RF signals, and outputs the converted RF signals.

13. (Original) The apparatus of claim 12, further comprising:

a radio frequency (RF) amplifier that amplifies the converted RF signals transmitted to predetermined amplitudes and outputs rectified signals.

14. (Original) The apparatus of claim 11, further comprising:

a digital signal processor (DSP) that detects synchronization signals of reproducing signals and outputs decoded RF signals.

15. (Original) The apparatus of claim 10, further comprising:

a servo that turns on and spins up a tracking servo and a focusing servo; and

a pickup that outputs RF signals from the optical disc when the servo turns on and spins up the tracking servo and the focusing servo.

16. (Original) The apparatus of claim 15, further comprising:

a motor driving unit that is controlled by the servo to drive a spindle motor.

17. (Original) The apparatus of claim 10, wherein the optical disc comprises a compact disc.

18. (Original) The apparatus of claim 10, wherein the optical disc comprises a Digital Versatile Disc to and from which data is recorded and/or reproduced.

19. (Original) A method of measuring an amount of disc imbalance of an optical disc, comprising:

increasing a disc speed;

measuring a time to reach a target speed while the disc speed increases; and

matching the time to reach the target speed to the amount of disc imbalance.

20. (Original) The method of claim 19, wherein the increasing the disc speed comprises:

increasing the disc speed from a low speed to a high speed.

21. (Original) The method of claim 20, further comprising:

determining whether the disc speed is stabilized at the low speed;

wherein the increasing the disc speed comprises increasing the disc speed only if the low speed is stabilized.

22. (Original) The method of claim 19, wherein the measuring the time comprises:

activating a timer.

23. (Original) The method of claim 19, further comprising:

selecting the target speed to minimize vibrations occurring in the disc drive regardless of the amount of disc imbalance.

24. (Original) The method of claim 19, further comprising:

detecting the optical disc inserted in the disc drive; and

activating focus and tracking servos if the optical disc is detected.

25. (Original) The method of claim 19, further comprising:

storing in a memory a plurality of rise time curves that correlate a time to reach the target speed to the amount of the disc imbalance; and

wherein the matching the time to reach the target speed to the amount of disc imbalance comprises accessing the stored plurality of rise time curves to select a rise time curve corresponding to the amount of the disc imbalance.

26. (Original) The method of claim 19, wherein the measuring the time to reach the

target speed comprises:

measuring the time to reach the target speed regardless of whether a spindle servo is stabilized to thereby reduce a lead-in time.

27. (Original) The method of claim 19, further comprising:

activating focusing and tracking servos; and

performing a spin-up control of a spindle motor.

28. (Original) The method of claim 19, further comprising:

measuring the disc speed during the increasing the disc speed.

29. (Original) The method of claim 28, further comprising:

comparing the measured disc speed to the target speed;

wherein the measuring the disc speed continues until the measured disc speed is equal to the target speed.

30. (Original) The method of claim 19, further comprising:

determining a plurality of time values for a plurality of discs having different disc unbalance values on the basis of the elapsed time to reach the target RPM.

31. (Cancelled)